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EXAMINER	
MONIKANG, GEORGE C	

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,926	Applicant(s) PETERSEN, KIM S.	
	Examiner GEORGE C. MONIKANG	**Art Unit** 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2009*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-11* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☒ All b)☐ Some * c)☐ None of:
1.☒ Certified copies of the priority documents have been received.
2.☒ Certified copies of the priority documents have been received in Application No. 10/574,926.
3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/28/2009 have been fully considered but they are not persuasive.

With regards to applicant's argument that the Krokstad et al reference fails to disclose analyzing the first and second microphone signals to detect when the casing is being touched, the examiner maintains his stand. The Krokstad et al reference discloses wherein the casing of a hearing device is being touched in order to change the processing of a hearing device by changing the program the device is processed by, thus changing the output of the hearing aid (*Krokstad et al, col. 12, lines 44-61*). Therefore, since the microphones of Krokstad et al pickup sound signals within the environment of its user, changing the program of the hearing device until its is appropriate for the environment of the sound signals picked up by the microphones does change the processing of the incoming signals from the microphone to the ears of the user. Hence, if the casing is not touched, the processing/program of the microphone signals will not change.

Since the addition of the reference Hinckley et al was added to reject newly added claims 10-11, this office action is final.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 & 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Krokstad et al, US Patent 5,276,739. (The Krokstad et al reference is cited in IDS filed 4/7/2006)

Re Claim 1, Krokstad et al discloses a method for processing signals from first and second microphones (*abstract*) in a listening device which has a casing holding the first and second microphones (*fig. 2: m1 & m2*), a signal processing unit which is to provides an output signal in correspondence with signals from the first and second microphones (*fig. 5a: DSP; abstract*) and suited to the users hearing, and a receiver unit for delivering the output signal to the user (*fig. 5a: SG; abstract*), comprising the steps of (a) analyzing the signals from said first and second microphones in order to detect when the casing of the listening device is being touched (*col. 12, lines 44-61: since the casing being touched changes the processing of the microphone signals, there has to be some kind of analytical link between the microphone signals and the casing being touched*), and (b) changing the signal processing of the signal processing unit when touching of the case is detected (*col. 12, lines 44-61: since the casing being touched changes the processing of the microphone signals, there has to be some kind of analytical link between the microphone signals and the casing being touched*).

Claim 8 has been analyzed and rejected according to claim 1.

Re Claim 9, Krokstad et al discloses the listening device as claimed in claim 8, including a sound generator for generating a specific sound when the casing is touched

(*col. 12, lines 44-61: touching of the case changes the processing of the microphone signal to generate a particular output signal*), such that a user may touch the sound generator whenever user input to the hearing aid is desirable (*col. 12, lines 44-61: different functions determines what kind of sound the user hears depending on the environment*).

Claim Rejections – 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 2-5 & 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krokstad et al, US Patent 5276739 as applied to claim 1 above, in view of Arcos et al, US Patent 5396560. (The Arcos et al reference is cited in IDS filed 4/7/2006)

Re Claim 2, Krokstad et al disclose the method as claimed in claim 1, but fails to disclose comprising determining short term energy in the signals from the microphones,

and determining change in difference over time in short term energy between the microphone signals as taught in Arcos et al (*Arcos et al, col. 3, lines 23-53*). It would have been obvious to use the short term energy determination ability of Arcos et al (*Arcos et al, col. 3, lines 23-53*) with the method of processing signals of Krokstad for the purpose of integrating the microphone signals.

Re Claim 3, the combined teachings of Krokstad et al and Arcos et al disclose the method as claimed in claim 2, whereby time related change in difference in the short term energy content in the microphone signals to determine the rate of change in difference between the short term energy of the microphone signals (*Arcos et al, col. 3, lines 23-53*).

Re Claim 4, the combined teachings of Krokstad et al and Arcos et al disclose the method as claimed in claim 2, comprising changing a value in the signal processing unit whenever the rate of change in difference in the short term energy between the microphone signals reaches a pre-selected level in order to indicate that the casing is being touched (*Arcos et al, col. 3, lines 23-53: acoustical power which does not significantly change over time for about 10 secs could be set time level of touching the case to enact a change in the signal processing*).

Re Claim 5, the combined teachings of Krokstad et al and Arcos et al disclose the method as claimed in claim 3, comprising temporarily interrupting a microphone matching procedure whenever it is determined that the casing is being touched (*Krokstad et al, col. 12, lines 44-61*).

Re Claim 7, the combined teachings of Krokstad et al and Arcos et al disclose the method as claimed in claim 3, comprising a lasting change in the signal processing whenever it is determined that a non-accidental touch of the casing has occurred (*Krokstad et al, col. 12, lines 44-61*).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krokstad et al, US Patent 5276739 and Arcos et al, US Patent 5396560 as applied to claim 3 above, in view of Le Bel, US Patent 6307482 B1.

5. Re Claim 6, the combined teachings of Krokstad et al and Arcos et al disclose the method as claimed in claim 3, but fails to disclose temporarily attenuating the output signal to the user whenever it is determined that the casing is being touched. However, Le Bel does (*Le Bel, col. 3, lines 29-47: minimizing noise*).

6. Taking the combined teachings of Krokstad et al, Arcos et al and Le Bel as a whole, one skilled in the art would have found it obvious to modify the method of Krokstad et al and Arcos et al with whereby the output signal to the user is temporarily attenuated whenever it is determined that the casing is being touched as taught in Le Bel (*Le Bel, col. 3, lines 29-47: minimizing noise*) to minimize the noise level caused by the touching of the device.

7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krokstad et al, US Patent 5276739 as applied to claim 1 above, in view of Hinckley et al, “Sensing Techniques for Mobile Interaction”.

Re Claim 1, Krokstad et al discloses the method as claimed in claim 1, but fails to explicitly disclose wherein steps (a) and (b) are accomplished without touching an electro-mechanical button on the casing of the listening device. However, Hinckley et al discloses touch sensors with no buttons that when detected, change the processing of a phone device accordingly (*Hinckley et al, page 92: Touch Sensors*). It would have been obvious to modify the ear device of Krokstad et al with touch sensing capabilities of Hinckley (*Hinckley et al, page 92: Touch Sensors*) such that the user could mereley touch the surface of the ear device in Krokstad et al to alter the processing for the purpose of making the Krokstad et al system more convenient to its user.

Claim 11 has been analyzed and rejected according to claim 1.

Contact

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEORGE C. MONIKANG whose telephone number is (571)270-1190. The examiner can normally be reached on M-F. alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George C Monikang/ 1/4/2010
Examiner, Art Unit 2614

/Vivian Chin/

Supervisory Patent Examiner, Art Unit 2614